

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/513,656	FILO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel R. Sellers	2615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/14/06.
2. ☒ The allowed claim(s) is/are 1,2,4,5,7-18,20-25,27-28, and 38-50.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.  |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Perry Hoffman on 6/6/06.

The application has been amended as follows:

Replace claim 1 with:

-- 1. An amusement system comprising:

a cartridge configured to store data representative of sound and to produce electrical signals representative of sound, where the cartridge includes memory, a processing system, programming executable by the processing system to produce electrical signals representative of sound from the data representative of sound, a modulator, which outputs a signal to drive an audio transducer in a player, input/output (I/O) circuitry, which controls the processor via controls included in the player, and at least one connector configured to releasably connect the cartridge to the player; and

a player to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals, where the player is configured to receive the cartridge and to releasably connect to the at least one connector of the cartridge, where the player further includes a transducer to produce the sound vibrations, and controls configured to trigger the cartridge to produce electrical

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signals representative of sound and to transmit those signals to the transducer to produce sound vibrations, where the player is devoid of a processor to process the electrical signals received from the cartridge or sent to the cartridge and the player includes an electrical power storage or battery in the player configured to supply electrical power to the processing system in the cartridge when the cartridge is received by the player. --

Replace claim 7 with:

-- 7. The amusement system of claim 1 where the player includes a structure to allow the player to be clipped to clothing and clothing accessories. --

Replace claim 8 with:

-- 8. The amusement system of claim 7 where the structure includes a loop to allow the player to be clipped to clothing and clothing accessories. --

Replace claim 9 with:

-- 9. The amusement system of claim 1 where the cartridge includes a structure to allow the cartridge to be clipped to clothing and clothing accessories. --

Replace claim 27 with:

-- 27. An amusement cartridge comprising:  
a printed circuit board;

a processing system associated with the printed circuit board to produce electrical signals representative of sound from the data representative of sound;

memory associated with the printed circuit board configured to store both data representative of sound and programming executable by the processing system to produce the electrical signals representative of sound from the data representative of sound;

a modulator, which outputs a signal to drive an audio transducer in a player;  
input/output (I/O) circuitry, which controls the processor via controls included in the player;

at least one connector configured to allow the cartridge to releasably connect to the player;

the player being devoid of cassette tape electro-mechanical player devices and devoid of a processing system but adapted to receive electrical signals representative of sound from said processing system associated with the printed circuit board of the cartridge and to produce sound vibrations from the received signals where a transducer to produce the sound vibrations;

a battery or other power supply;

controls to trigger the processing system are provided on the player separate from the amusement cartridge and coupled thereto via said at least one connector with the electrical signals representative of sound from the cartridge being coupled there through; and

a housing for the printed circuit board, processing system, modulator, I/O circuitry, and memory. --

Replace claim 38 with:

-- 38. A portable amusement system comprising:

a cartridge configured to store data representative of sound and to produce electrical signals representative of sound, where the cartridge includes memory, a processing system, programming executable by the processing system to produce electrical signals representative of sound from the data representative of sound, a modulator, which outputs a signal to drive an audio transducer in a portable player, input/output (I/O) circuitry, which controls the processor via controls included in the portable player, and at least one connector; and

the portable player to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals, where the player is configured to receive the cartridge and to releasably connect to the at least one connector of the cartridge, the portable player being devoid of a processor to process the electrical signals received from the cartridge and the portable player further comprising a battery or other power supply separate from the cartridge to power the processing system. --

Replace claim 44 with:

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-- 44. The amusement system of claim 38 where the player includes a structure to allow the player to be clipped to clothing and clothing accessories. --

Replace claim 45 with:

-- 45. The amusement system of claim 38 where the cartridge includes a structure to allow the cartridge to be clipped to clothing and clothing accessories. --

Replace claim 48 with:

-- 48. An amusement cartridge for use in an amusement system, comprising:

a printed circuit board;

a processing system associated with the printed circuit board to produce electrical signals representative of sound from the data representative of sound;

memory associated with the printed circuit board configured to store both data representative of sound and programming executable by the processing system to produce the electrical signals representative of sound from the data representative of sound;

a modulator, which outputs a signal to drive an audio transducer in a player;

input/output (I/O) circuitry, which controls the processor via controls included in the player;

at least one connector configured to allow the amusement cartridge to releasably connect to the player,

the player being devoid of cassette tape electro-mechanical player devices and devoid of a processing system but adapted to receive electrical signals representative of sound from said processing system associated with the printed circuit board of the amusement cartridge and to produce sound vibrations from the received signals where a transducer to produce the sound vibrations and controls to trigger the processing system are provided on the player separate from the amusement cartridge and coupled thereto via said at least one connector with the electrical signals representative of sound from the cartridge being coupled there through, where the amusement cartridge is devoid of a battery or other electrical power source and where the player includes an electrical power storage or battery configured to supply electrical power to the processing system of the amusement cartridge when the amusement cartridge is received by the player; and

a housing for the printed circuit board, processing system, modulator, I/O circuitry, and memory. --

Replace claim 49 with:

-- 49. An amusement system comprising:

a cartridge configured to store data representative of sound and to produce electrical signals representative of sound, where the cartridge includes memory, a processing system, programming executable by the processing system to produce electrical signals representative of sound from the data representative of sound, a modulator, which outputs a signal to drive an audio transducer in a portable player,

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input/output (I/O) circuitry, which controls the processor via controls included in the portable player, and at least one connector; and

the player to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals, where the player is configured to receive the cartridge and to releasably connect to the at least one connector of the cartridge, the player being devoid of a processor to process the electrical signals received from the cartridge and the player further comprising an electrical power storage or battery separate from the cartridge to power the processing system. --

Replace claim 50 with:

-- 50. An amusement system comprising:

a cartridge configured to store data representative of sound and to produce electrical signals representative of sound, where the cartridge includes memory, a processing system, programming executable by the processing system to produce electrical signals representative of sound from the data representative of sound, a modulator, which outputs a signal to drive an audio transducer in a portable player, input/output (I/O) circuitry, which controls the processor via controls included in the portable player, and at least one connector configured to releasably connect the cartridge to the player; and

the player to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals, where the player is



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configured to receive the cartridge and to releasably connect to the at least one connector of the cartridge, where the player further includes a transducer to produce the sound vibrations, and where the player includes controls configured to trigger the cartridge to produce electrical signals representative of sound and to transmit those signals to the transducer to produce sound vibrations, but where the player is devoid of cassette tape electro-mechanical player devices and devoid of a processor to process the electrical signals received from the cartridge where the player includes a battery or other electrical power storage in the player configured to supply electrical power to the processing system in the cartridge when the cartridge is received by the player. --

2. The following is an examiner's statement of reasons for allowance:

The prior art relied upon in a previous office action does not teach or suggest the following features:

A modulator in a cartridge, which drives a transducer in a separate player device, such as the pulse-width modulator (Specification p.4, lines 20-21) or similar such devices known to one of ordinary skill in the art at the time of the invention.

a input/output circuitry in a cartridge, which handles the input signals from a separate player device (Specification p. 5, lines 10-15), and

a player device that is devoid, or completely lacking, a processor to process any signals sent from the player device to the cartridge or signals received from the cartridge (Specification p. 2, line 16 - p. 3, line 2).

Sagara et al., USPN 4,614,144, teaches a conventional audio player and cartridge system. Figure 1 shows the division of a conventional system wherein the music card sends signals to a synthesizer, which sends signals to be amplified and then output via a speaker. The memory card is comprised of memory and a microcomputer (Fig. 3), however the microcomputer does not decode the music stored in the memory in the same fashion as the current invention. The synthesizer and amplifier, which reside in the player, are necessary to create the electrical signal representative of sound (Col. 4, lines 55-59).

Grewe et al., USPN 5,724,482, teaches another conventional audio cartridge and player system. A tray system holds the memory and a microprocessor, however the microprocessor in the tray system handles input and output processing not decoding. A DSP handles the decoding in the base system, or audio player (Col. 2, lines 20-39).

Chawla et al., USPN 6,327,633, teaches a solid state playing device that has a processor separate from the player device, but the device relies on the player for amplification, or driving the audio transducer connected to the player, and relies on the player for processing input and output signals (Col. 1, lines 50-62, Col. 5, lines 1-65, and Fig. 4, units 414 and 460).


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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